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An Essay

Passed March 1828

On Ascites

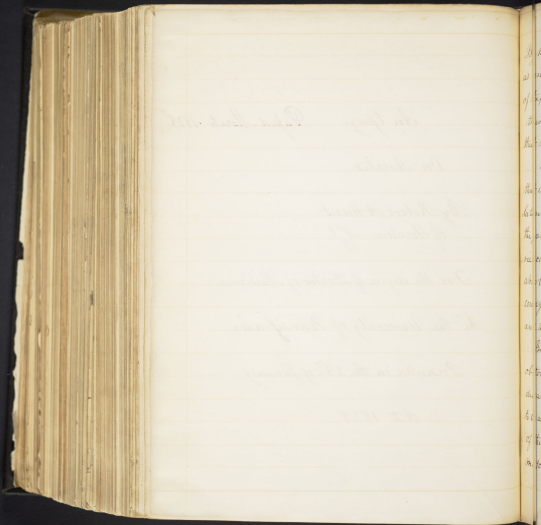
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For the degree of Doctor of Medicine

In the University of Pennsylvania

Presented on the 23^d of January

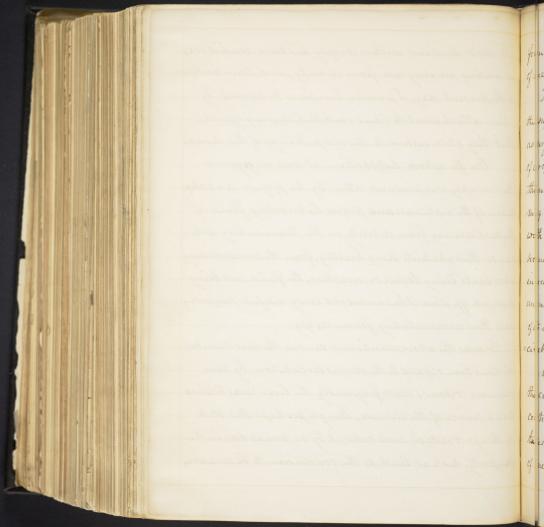
A.D. 1828



By most medical writers dropsy has been considered, as arising in every case from debility, and some authors of the present day, I presume, have been so swayed by their attachment to ideas imbibed during youth, that they still adhere to the old pathology of this disease.

On the above supposition, it was imagined that dropsy was produced either by too profuse an exhalation of the natural and proper lubricating fluid of the part, arising from debility in the terminating arteries, or the exhalents being healthy, from the corresponding absorbents being torpid or inactive, the fluid not being conveyed off, when it has answered every useful purpose, and thus accumulating forms dropsy.

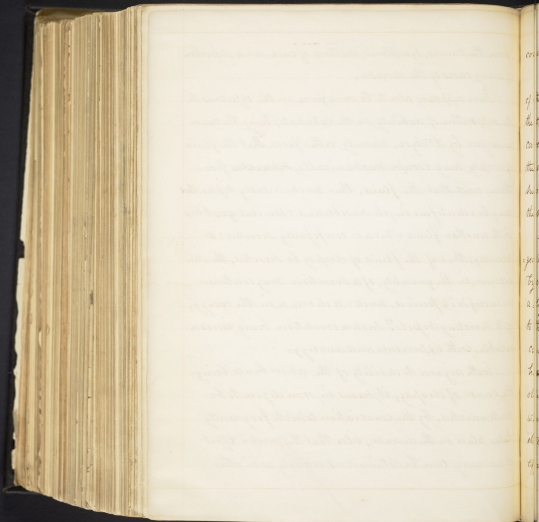
Besides the above mentioned causes, the mechanical obstruction opposed to the venous circulation, by some diseased viscus (most frequently the liver) was believed to be a source of the disease. Though perhaps this state of things exists, in some cases, it by no means does in the majority, such at least is the conclusion to be drawn,



from the causes, symptoms, method of cure, and disposition
of many cases of the disease.

There appears also to be some force in the objections to
the supposition of debility in the exhalants, being the cause
as urged by L^d Syre, namely, either first, That the fluid
of dropsy may escape mechanically, ~~separated~~ from
them, and that the fluid, thus mechanically separated
may be identified in its sensible and chemical qualities
with another fluid which is copiously secreted: or
secondly, that if the fluid of dropsy be secreted, then an
increase in the quantity, of a secretion may continue
an indefinite period, and a decrease in the energy,
of its secreting vessels. Such a condition being incon-
-citable, with experience and analogy.

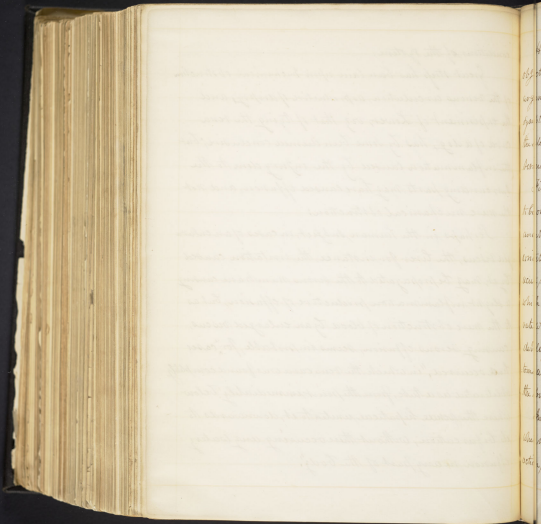
With regard to debility of the absorbents being
the cause of dropsy, it seems in some degree to be
contradicted, by the emaciation which frequently
takes place in the disease, also that the specific effect
of Mercury can be obtained as readily as in other



conditions of the system.

Great stress has been laid upon mechanical obstruction of the venous circulation, as productive of dropsy, and the experiment of Lower, viz. that of tying the vena cava of a dog, has by some been deemed conclusive; but the inflammation caused by the injury done to the surrounding parts, may have caused effusion, and not the mere mechanical obstruction:

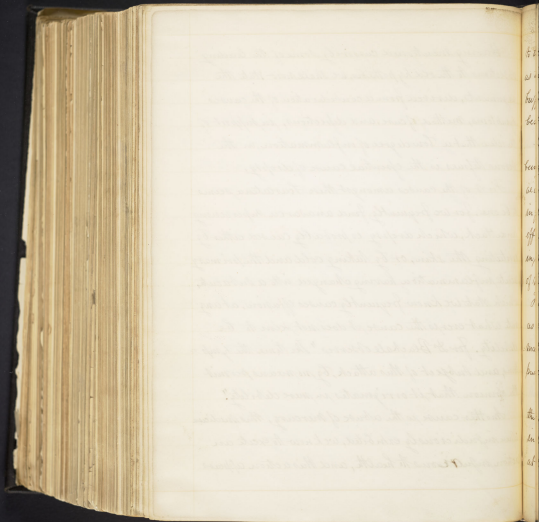
Perhaps in the human subject, in cases of an enlarged viscus, the liver for instance, the irritation caused by it, may be propagated to the serous membrane causing a slight inflammation productive of effusion, but as to the mere obstruction of blood by an enlarged viscus, causing serous effusion, seems improbable, for "cases have occurred," in which the vena cava was found completely obliterated as a tube, from the point immediately below where the pons hepaticus, united to it, downwards to its bifurcation, without there occurring any watery effusion in any part of the body.



Having mentioned cursorily some of the leading objections to the old hypothesis, we shall now state the arguments, derived from a consideration of the causes, symptoms, method of cure, and disposition, in support of the idea that a low degree of inflammation in the serous surfaces is the essential cause of dropsy.

First of the causes amongst these Scirrhus seems to be one, for we frequently find anasarca supervening on an attack, which dropsy is probably caused either by irritating the skin, or by taking cold and the primary acute inflammation having changed into a subacute, which state we know frequently causes effusion, at any rate what ever is the cause, it does not seem to be debility. For Dr Blackall observes "The time the symptoms, and progress of this attack, by no means permit the opinion that it originates in mere debility."

Another cause is the abuse of mercury, this medicine when injudiciously exhibited, we know to excite an action injurious to health, and this action appears



to be of an inflammatory kind, Matthew considers it as being highly so and saying, that the blood is found buffed in a high degree as to that resection, is the best remedy for profuse salivation:

With regard to the symptoms, the effusion itself being considered, merely as an effect and not the disease, we are not to seek in it, many signs and evidences of inflammation, some however do occur, First the effusion has been found opaque, with portions of lymph mixed, and in one case Dr Blackall says, "The fluid of the cellular membrane coagulated spontaneously." These appearances agree with what Bichat describes as existing in fluids produced by chronic inflammation of serous membranes, he says, "they are seldom pure almost always troubled lactescent &c."

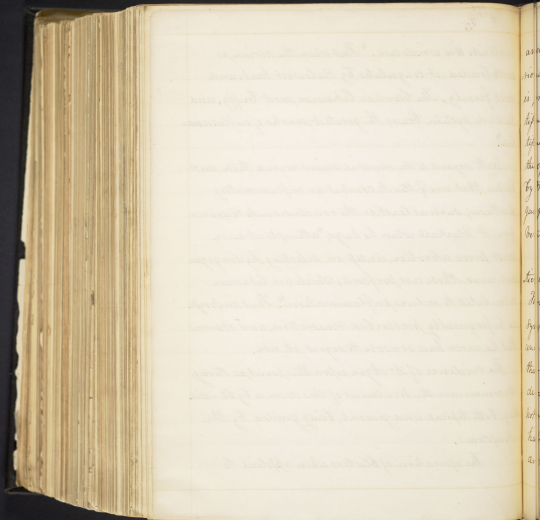
The urine offers more for our consideration on this point; it has been found to be more or less coagulable in proportion to the degree of action, which the system at large manifests; on this point Dr Blackall is very

explicit: his words are, "That when the urine is most loaded, it coagulates by the lowest heat, and most firmly, The blood is likewise most buffy, and the whole system bears the greatest marks of inflammation."

With regard to the remedial means we find those most useful that are fitted to combat an inflammatory diathesis; such at least is the conclusion to be drawn from Dr Blackall when he says, "attempts at cure must prove abortive, unless in selecting hydragogue medicines, those are preferred, which are likewise calculated to reduce inflammation". Thus improperly he frequently prescribed venesection, and observes that he never had reason to regret its use.

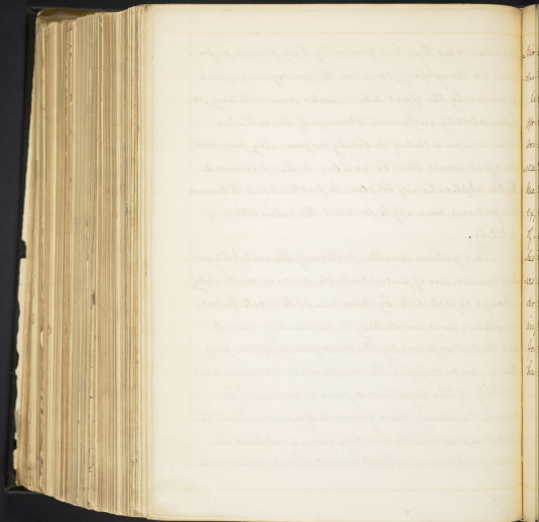
The evidence of Dr Ayr, upon this point is strong, He commences the treatment of this disease by bloodletting, both topical and general, being guided by the symptoms.

The operation of blisters when applied to



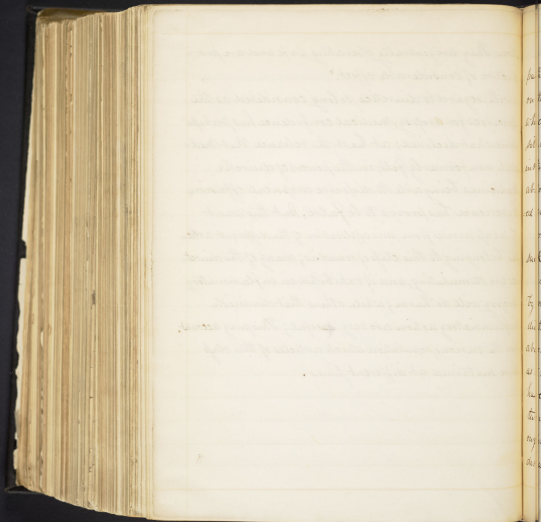
anasarcous legs has generally been found inju-
rious, as sloughing sores are the consequence, such
is precisely the effect to be expected from irritating, a
tissue already inflamed, whereas if the cellular
tissue was in a state of debility as generally supposed,
the effect would then be similar to that produced
by the application of blisters to parts about to become
gangrenous, namely to prevent the extinction of
vitality.

Purgatives another portion of the antiphlogis-
tic course, are of incalculable service in dropsy;
Though objected to by some as apt to excite febrile
symptoms and irritating the alimentary canal,
and that it is generally the consequence of purging,
that if unsuccessful, the complaint is increased, and
debility of the digestive organs is induced, yet
notwithstanding these grounds of alarm, when the
habit is unerrable and free from gout, and the
dropsy extensive, without fever or local determina-



tion. They are generally operating safe and are pro-
ductive of considerable effect.

With regard to diuretics, so long considered as the
specifics for dropsy, medical confidence has perhaps
somewhat declined: at least the reliance that Med-
ical men formerly felt, in the powers of diuretic
medicines being able to disperse dropsical effusions,
experience has proved to be false. But this want
of success arises from misapplication of the different arti-
cles belonging to this class of remedies; many of the diuret-
ics are stimulating, and if exhibited in inflammatory
dropsy will do harm; while others that diminish
inflammatory action are very useful; This may account
for the various reputation which articles of this class
have sustained at different times.

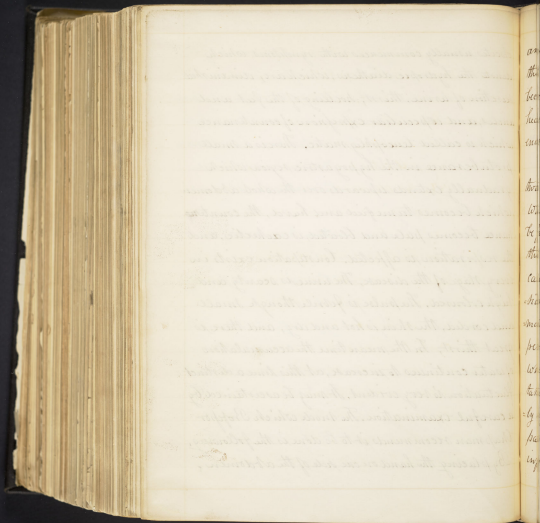


Having thus given a summary account of the pathology of dropsy, I shall now offer a few remarks on that preternatural collection of water, in the abdomen which is called Ascites. The water, most commonly is situated in the cavity of the peritoneum, but in some instances, it is found between the peritoneum and abdominal muscles, when in this situation, it is called encysted dropsy.

Ascites is of Greek derivation, from *ασκος* a sack, from its sack like protuberance.

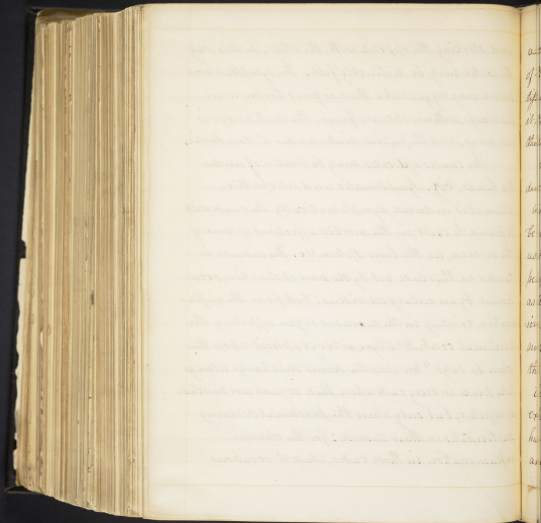
Although the approach of this disease is attended by most of the symptoms, which denote the hydropic diathesis, together with swelling and fluctuation of the abdomen, it is sometimes clothed in so much obscurity as to render its diagnosis somewhat difficult, and it has even been confounded with tympanites, and the tumor of pregnancy. To prevent such mistakes we ought to pay strict attention to the symptoms of the disease, which are the following.

Ascites usually commences with symptoms which denote the hydropic diathesis, which are, diminished secretion of urine, thirst, swelling of the feet and ankles, and a peculiar expression of countenance which is called leucophlegmatic. There is a small protuberance in the hypogastric region which gradually extends upwards over the whole abdomen, which becomes tumefied and hard, the countenance becomes pale and bloated, is cachectic, and the respiration is affected. Constipation exists in every stage of the disease. The urine is scanty and high coloured. The pulse is febrile though small and corded, the skin is hot and dry, and there is great thirst. In the mean time the accumulation of water continues to increase, at this time a distinct fluctuation is very evident. It may be ascertained by a careful examination. The mode which Professor Chapman recommends it to be done is the following. By placing the hand on one side of the abdomen,



and striking the opposite with the other. In this way the water may be distinctly felt. The symptoms now become more aggravated there is great torpor and heaviness, with an obscure fever, the distension is enormous, and the patient sinks, under a slow hectic.

The causes of Ascites may be treated of under two heads, viz. Symptomatic and idiopathic, When it is induced symptomatically the cause will be found to exist in the morbid affections of some of the viscera, as the liver spleen &c. The disease is caused in this case not by the mere obstruction occasioned by an enlarged viscus, but from the inflammation existing in the diseased organ affecting the peritoneal coat. Brodyre is very explicit upon this when he says "Nor does the serous discharge always take place in every case where these organs are morbidly affected, but only where the peritoneal covering participates in their disease; for the chronic inflammation in those cases, where it occasions

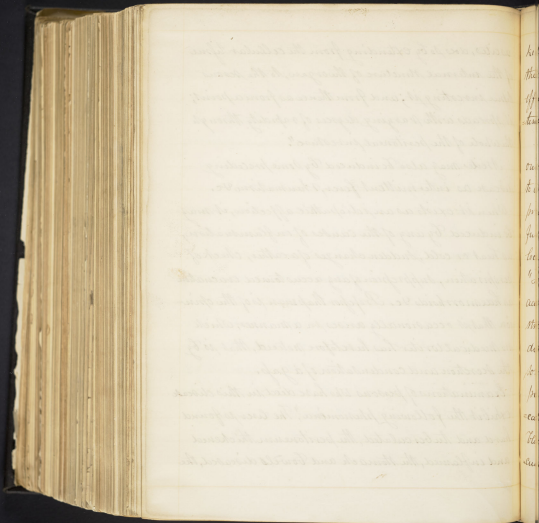


ascites, does so by extending from the cellular tissue of the internal structure of the organ, to the serous tissue investing it; and from thence as from a point; it spreads with varying degrees of rapidity through the whole of the peritoneal investment.

Ascites may also be induced by some preceding disease as intermittent fever, rheumatism &c.

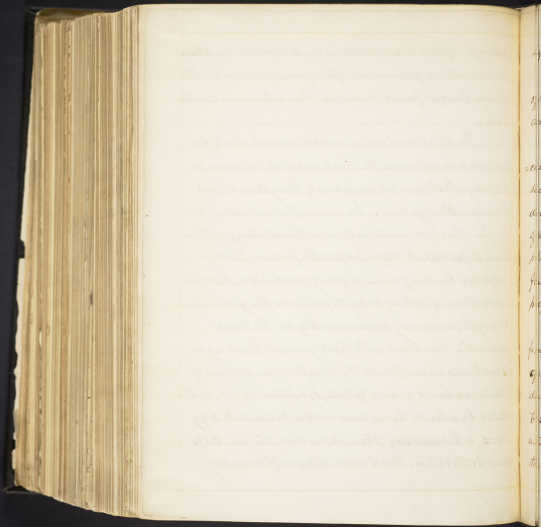
When it exists as an idiopathic affection, it may be induced by any of the causes of inflammation, as heat or cold, sudden changes of weather, check of perspiration, suppression of any accustomed evacuation as hæmorrhoids &c. Professor Chapman is of the opinion that it occasionally arises in a manner, which no Medical writer has hitherto noticed, that is by the secretion and condensation of a gas.

Examinations of persons who have died in this disease exhibit the following phenomena, The liver is found hard and tuberculated, the peritoneum thickened and inflamed, the stomach and bowels diseased, the



kidneys, spleen and pancreas in a morbid condition, the mesenteric glands are often found indurated, the effused fluid is found varied in character and consistence.

The first indication which presents itself for our consideration in the treatment of this disease, is to change that morbid condition of the system which produces the effusion. The remedy best adapted to fulfill the above indication, is blood letting either local or general, Dr Syde prefers the former, he says "Topical bleeding when properly conducted, has the advantage of acting only slightly on the general strength, and very considerably on the local disease". Combined with local general bleeding is sometimes indispensably necessary in persons of plethoric habit or where febrile symptoms exist, indicated by a tense, hard and corded pulse, with dizzy blood, a hot and dry skin, a parched tongue, difficult respiration, thirst and other inflammatory



Symptoms.

Having pushed this part of the depleting plan of treatment to some extent, we will find that the auxiliary remedies are more efficacious.

At this stage of the disease purgatives become of incalculable benefit, They should be administered in such a manner if possible, as to keep up a constant drain from the bowels, of the numerous combinations of medicines of this class, which have been resorted to, as possessing peculiar powers in evacuating the effused fluid in abdominal dropsy, Professor Chapman prefers the following, *Emmors-tular Si Jalap* ℥ss ℥ss .

We are often prevented by the presence of diarrhoea from deriving full benefit from the purgative plan of treatment, when this is the case we must resort to diuretics, they are important remedies in this disease, but their operation is rather palliative than otherwise, as they merely evacuate the fluid without correcting the morbid action on which the effusion depends.

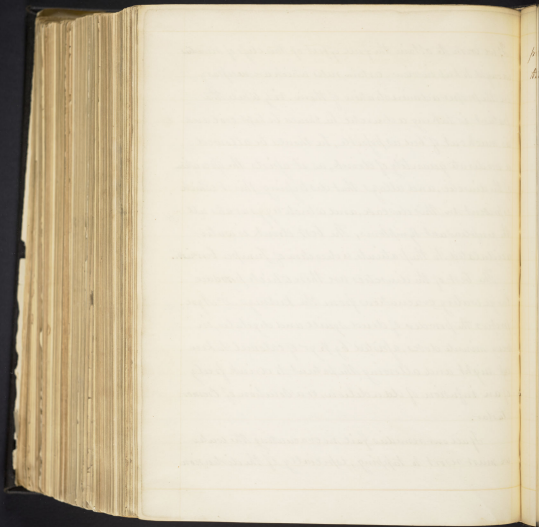
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If we wish to obtain the full effect of this class of remedies (ought to keep in view, certain rules which are necessary in the proper administration of them. viz. While the patient is taking a diuretic he should be kept cool and as much out of bed as possible, he should be allowed a moderate quantity of drink, as it assists the operation of the diuretic, and allays that distressing thirst which is present in this disease, and which aggravates all the unpleasant symptoms. The best drink is water acidulated to the patient's decoction of Juniper berries.

The best of the diuretics are those which produce large watery evacuations from the kidneys. Dr. Ayrer prefers the powder of dried Squill and digitalis, in very minute doses, assisted by \frac{ss} of calomel taken at night and allowing the patient to drink freely of an infusion of dandelion, or a solution of Citron Tartar.

If all our remedies fail in evacuating the water we must resort to tapping, especially if the distension



produces much pain, as great relief is obtained and
the system becomes more susceptible to our remedies.

